Clinical and demographic differences between voluntary and involuntary psychiatric admissions in a university hospital in Brazil

Diferenças clínicas e demográficas entre internações psiquiátricas voluntárias e involuntárias em um hospital universitário no Brasil

Las diferencias clínicas y demográficas entre los ingresos psiquiátricos involuntarios y voluntarios en un hospital universitario en Brasil

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Abstract

To assess the frequency of involuntary psychiatric hospitalizations from 2001 to 2008 and to determine associated clinical and sociodemographic characteristics, a retrospective cohort study was conducted. Adult admission data were collected from a university hospital in Brazil. Hospitalizations were classified as voluntary (VH) or involuntary (IH). Groups were compared using chi-square test for categorical variables and Mann-Whitney test for continuous non-parametric variables. The relative risk of certain events was estimated by the odds ratio statistic. Of 2,289 admissions, 13.3% were IH. The proportion of IH increased from 2.5% to 21.2% during the eight year period. IH were more frequently associated with female gender, unmarried status, unemployment, and more than 9 years of schooling. Psychotic symptoms were more common among IH. There were no differences in age, duration of hospitalization, or rate of attendance at first appointment after hospital discharge. Understanding of the characteristics associated with IH is necessary to improve the treatment of psychiatric disorders.

Commitment of Mentally Ill; Hospitalization; Psychotic Disorders; Cohort Studies

Resumo

Uma coorte retrospectiva foi conduzida para avaliar a frequência de internações psiquiátricas involuntárias entre 2001 e 2008, e para determinar características clínicas e sociodemográficas associadas. Informações de internações de adultos foram coletadas de um hospital universitário no Brasil. As hospitalizações foram classificadas como voluntárias (HV) ou involuntárias (HI). Os grupos foram comparados pelo uso do teste qui-quadrado para variáveis categóricas e Mann-Whitney para variáveis contínuas não paramétricas. O risco relativo de certos eventos foi estimado por odds ratio. De 2.289 internações, 13,3% eram HI. A proporção de HI aumentou de 2,5% para 21,2% no período de oito anos. HI foram mais frequentemente associadas ao sexo feminino, estado civil solteiro, desemprego, e mais de 9 anos de escolaridade. Sintomas psicóticos foram mais comuns entre HI. Não houve diferenças na idade, tempo de internação e comparecimento na primeira consulta após a alta hospitalar. É necessário compreender características associadas com HI para melhorar o tratamento de transtornos psiquiátricos.

Internação Compulsória de Doente Mental; Hospitalização; Transtornos Psicóticos; Estudos de Coortes

Introduction

Rates of involuntary hospitalizations (IH) are considered an indicator of mental health care legislation [1]. During the late 1980s and early 1990s, Brazil went through a political process that culminated in the *Federal Constitution* of 1988, which represented the democratization of the country and strengthened social and political rights of individuals. The Psychiatric Reform mirrored this scenario for mental health issues. An inpatient care model based on psychiatric hospitals was replaced by outpatient assistance for the management of critically ill patients, called CAPS (Psychosocial Care Center) [2].

In this context, legislation supporting the new concept of public psychiatry anchored in human rights, freedom, and modern methods of treatment within the organization of services needed to be implemented. Thus, Law 10,216 was approved in 2001. Patients with psychiatric disorders had their rights protected with regard to access to community mental health treatment, the regulation of hospitalizations, and the reduction of long stay beds in psychiatric hospitals [2].

According to this law, psychiatric hospitalizations were classified as voluntary (VH) (with patient's consent), involuntary (without patient's consent), or compulsory (required by Court) [3].

Recent research has highlighted an association between IH and low educational level, unemployment, social deprivation, poor social support, being unmarried for men or married for women, diagnosis (schizophrenia, delusional disorders, and substance misuse), and treatment engagement [4,5,6]. Also, involuntariness is associated with the severity of the disorder, lack of insight, and violent behavior [7].

The purpose of this study is to compare sociodemographic and clinical characteristics of VH and IH in a public university hospital in Brazil.

Methods

Information on all adults (≥ 18 years old) hospitalized between 2001 and 2008 at the Institute of Psychiatry of the Clinical Hospital, Faculty of Medicine, University of São Paulo, due to a mental or behavioral disorder coded by the 10th revision of the International Classification of Diseases (ICD-10) was obtained from the computer-based Integrated Hospital Management System and medical records.

Database information consisted of type of hospitalization (VH or IH), sociodemographic characteristics (age, gender, ethnicity, marital status, education level, employment status), and clinical data (psychosis at admission, diagnosis, length of hospitalization, and outpatient treatment adherence following discharge).

Data were compared using chi-square tests for categorical variables and Mann-Whitney tests for continuous non-parametric variables. Results were considered statistically significant at $p < 0.05$. Odds ratio analysis with 95% confidence interval was used to examine the association between IH and the clinical characteristics at admission (diagnosis and psychotic symptoms). All tests were conducted using the SPSS 16.0 statistical software (SPSS Inc., Chicago, USA).

This study was approved by the local ethics committees.

Results

Of 2,289 patients, 305 (13.3%) were admitted involuntarily. No information was available for compulsory hospitalization. IH increased from 2.5% in 2001 to 21.2% in 2008 ($p < 0.001$) (Figure 1).

The mean ages of VH and IH patients were 40 years (SD = 15) and 41 years (SD = 18; not significant). As compared to VH, IH were more frequently associated with female gender ($p = 0.017$), unmarried status ($p = 0.003$), unemployment ($p < 0.001$), and more than 9 years of schooling ($p = 0.041$).

Regarding clinical variables, IH were more frequent among patients with psychotic symptoms ($p < 0.001$) and with the following diagnoses: anorexia nervosa ($p < 0.001$), alcohol and substance related disorders ($p < 0.001$), personality disorders ($p = 0.018$), organic mental disorders ($p = 0.036$), and schizophrenia ($p = 0.05$). There were no differences in the duration of hospitalization and the attendance at first appointment after discharge (Table 1).

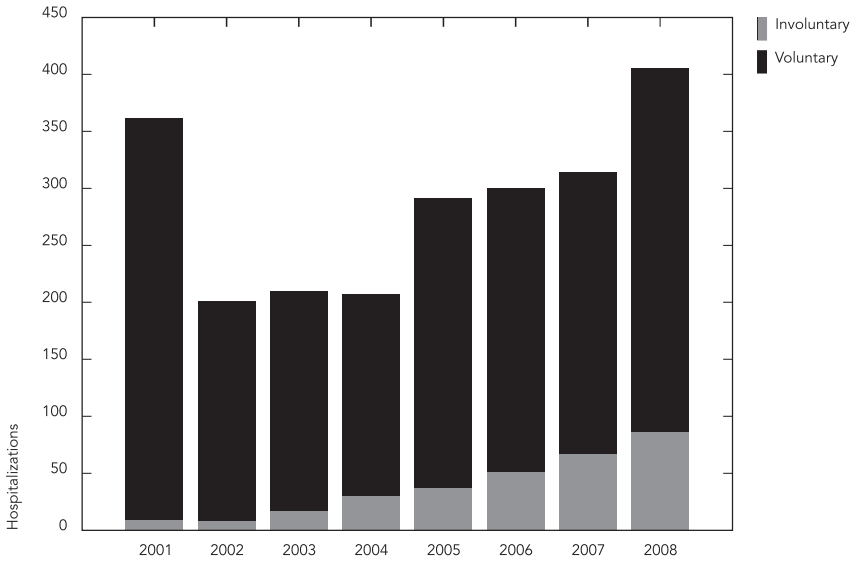
Discussion

In the present study, the proportion of IH was 13.3% which is consistent with the mean rate of 15-20% reported in literature [5,7,8]. Since 2001, following approval of Law 10,216, rates of IH progressively increased, mainly because notifications have been improved.

It is important to contextualize these findings within the Psychiatric Reform, characterized by (a) the structuring of Community Mental Health Services set up to care for people with severe psychiatric disorders, (b) the Return Home Program, which provided financial support for families

Figure 1

Involuntary and voluntary hospitalizations.



who received relatives after long hospital stays, (c) financial incentives to reduce psychiatric beds, and (d) closure of psychiatric hospitals [9].

The shift from hospital-based to community-based assistance services may have produced gaps in the quality and availability of treatment for severe cases and increased IH [10], which may partially explain our results because our sample was provided by a tertiary hospital.

Regarding diagnosis, psychosis was twice as frequent in IH. Schizophrenia is associated with a higher probability of IH [11]. Indeed, rates of IH as high as 58% have been reported among patients with psychosis [12]. Psychosis may be related to a lack of treatment engagement, resistance to treatment, and/or impaired insight, thereby inducing involuntariness [5]. Moreover, a psychotic state may increase IH rates due to clinical severity and danger to self or others [7]. Also, violent behavior and lack of insight may have accounted for IH due to alcohol and substance misuse.

IH rates were more frequent among unmarried people, which may be related to poor social support [5,10,13]. As our sample included many patients with psychosis, it is fair to consider that the relationship between unmarried status and IH may be mediated by psychotic status, since schizophrenic subjects are more frequently unmarried [6].

A large number of IH patients were unemployed, which is consistent with an increase in IH after contractions in the labor market [14]. The association between unemployment, poor community involvement, and an increased risk for aggressive behavior may have accounted for high rates of IH [13].

Even though some studies have reported a male preponderance in IH, others have found a higher proportion of female patients [11,12,15]. We hypothesize that the female preponderance of IH may be explained by the presence of an eating disorders unit, which accounted for 15% of beds and was occupied mainly by female patients.

We observed a higher level of education in the IH group, which is inconsistent with previous studies [6]. We hypothesize that schooling may be associated with an awareness of individual's rights, causing the patient to disagree with inpatient treatment.

The high rate of IH due to organic mental disorders is explained in part by the fact that 15% of our beds were for geriatric patients, most of them with dementia, for whom IH is justified by lack of capacity to care for themselves [16].

Table 1

Clinical and demographic differences between involuntary and voluntary hospitalization groups.

	Involuntary hospitalization (%) (n = 305)	Voluntary hospitalization (%) (n = 1,984)	p-value
Age [years ± SD]	41 ± 18	40 ± 15	0.988
Sex			
Male	44.0	51.0	0.017 *
Female	56.0	49.0	
Marital status			
Married	33.0	32.0	
Unmarried	67.0	68.0	0.003 *
Ethnic origin			
White	86.0	86.1	
Mulatto	7.2	7.4	0.91
African-American	3.4	3.7	
Asian	3.4	2.7	
Schooling (years)			
0	1.4	1.9	
1-8	32.5	39.0	0.041 *
9-11	41.4	38.3	
> 11	24.8	20.9	
Working			
Yes	57.0	70.0	< 0.001 *
No	43.0	30.0	
Psychosis			
Yes	55.0	37.0	< 0.001 *
No	45.0	63.0	
Anorexia nervosa	8.0	3.0	< 0.001 *
Alcohol and substance related disorders	5.6	18.9	< 0.001 *
Schizophrenia	21.8	17.0	0.05 *
Personality disorders	3.9	1.8	0.018 *
Organic mental disorders	4.6	2.4	0.036 *
Bipolar disorder	22.5	20.8	0.48
Depressive disorder	15.1	19.8	0.064
Anxiety disorders	1.4	2.4	0.39
Duration of hospitalization [days ± SD]	49.8 ± 52.9	42.6 ± 43.8	0.158
Adherence to treatment			
Yes	87.0	87.0	1.000
No	13.0	13.0	

This study has some limitations. We did not use a standardized assessment instrument for diagnosis, which was based on a clinical interview as performed in day-to-day practice. The dataset is of admission episodes and not of patients; some of whom were admitted more than once. Unfortunately, the dataset did not include information about the quality of community service assistance after hospitalization discharge, so analysis of rehospitalizations was not feasible. Furthermore, the generalizability of findings is limited since 30% of beds were comprised of eating disorders and geriatric causes of hospitalizations, which differs from most of public hospitals. Finally, the retrospective design is another limitation of our study.

The strengths of this study are its large study cohort, the duration of the observation period, and the fact that this is the first research of its kind done in a developing country.

The present study has identified characteristics associated with IH and VH that are important to implement adequate mental health resources in the primary care, outpatient clinical treatment services, and other facilities such as day hospital in other to decrease the number of IH and improve the quality of treatment of psychiatric patients.

Resumen

Un estudio de cohorte retrospectivo se realizó para evaluar la frecuencia de los ingresos psiquiátricos involuntarios entre 2001 y 2008, y para determinar las características sociodemográficas y clínicas asociadas. Las hospitalizaciones psiquiátricas de un hospital universitario en Brasil fueron clasificadas como voluntarias (HV) o involuntarias (HI). Los grupos se compararon mediante la prueba de chi-cuadrado para las variables categóricas y la prueba de Mann-Whitney para las variables continuas no paramétricas. El riesgo relativo de ciertos eventos se estimó por la odds ratio. *De 2.289 hospitalizaciones, el 13,3% eran HI. La proporción de HI aumentó del 2,5% al 21,2% en ocho años. HI fueron más asociadas con el sexo femenino, estado civil soltero, desempleo, y más de 9 años de escolaridad. Los síntomas psicóticos fueron más comunes entre HI. No hubo diferencias en la edad, la duración de la estancia y la asistencia a la cita después del alta hospitalaria. Es necesario comprender las características asociadas con HI para mejorar el tratamiento de los trastornos psiquiátricos.*

Internación Compulsoria del Enfermo Mental; Hospitalización; Trastornos Psicóticos; Estudios de Cohortes

Contributors

All authors contributed equally to the article.

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